

REDRAWN: TJA 7/05

Designed	<u>A. WOOD</u>	Date	<u>11/90</u>
Drawn	<u>DUNN</u>		<u>12/90</u>
Checked	_____		_____
Approved by	_____		_____

Drawn DUNN 12/90

Checked _____

Approved by _____

_____ COUNTY, PENNSYLVANIA

ROOFED STACKING STRUCTURE – SOLID MANURE



Natural Resources Conservation Service
United States Department of Agriculture

Natural Resources Conservation Service
United States Department of Agriculture

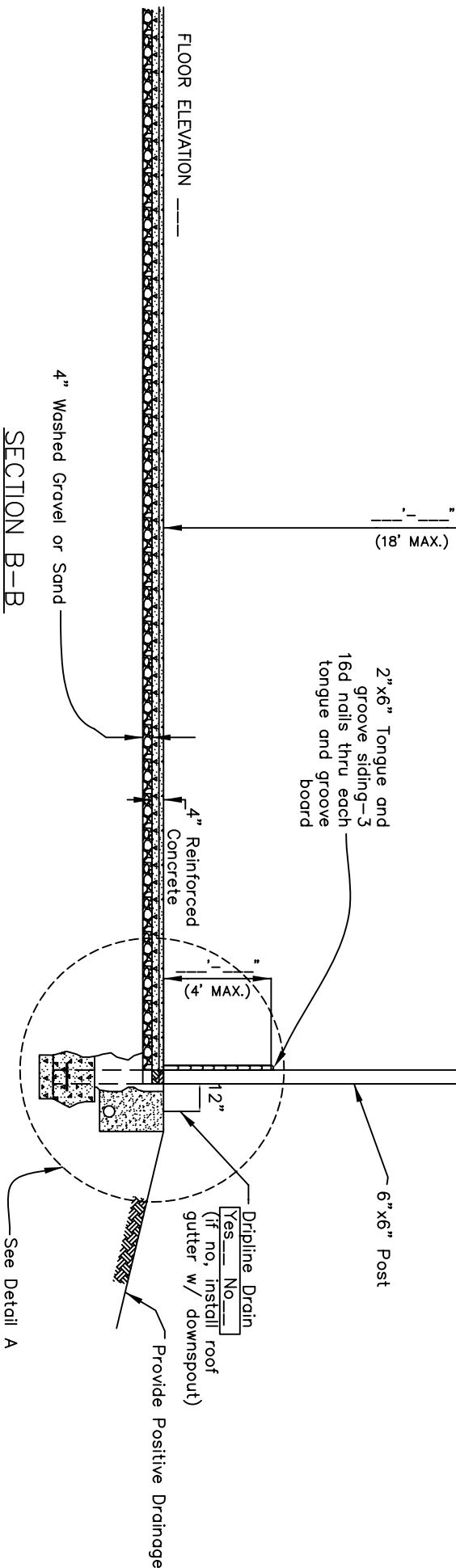
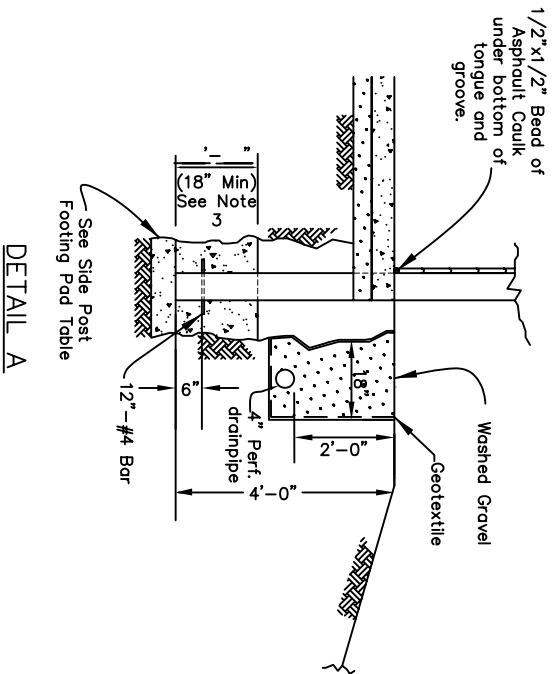
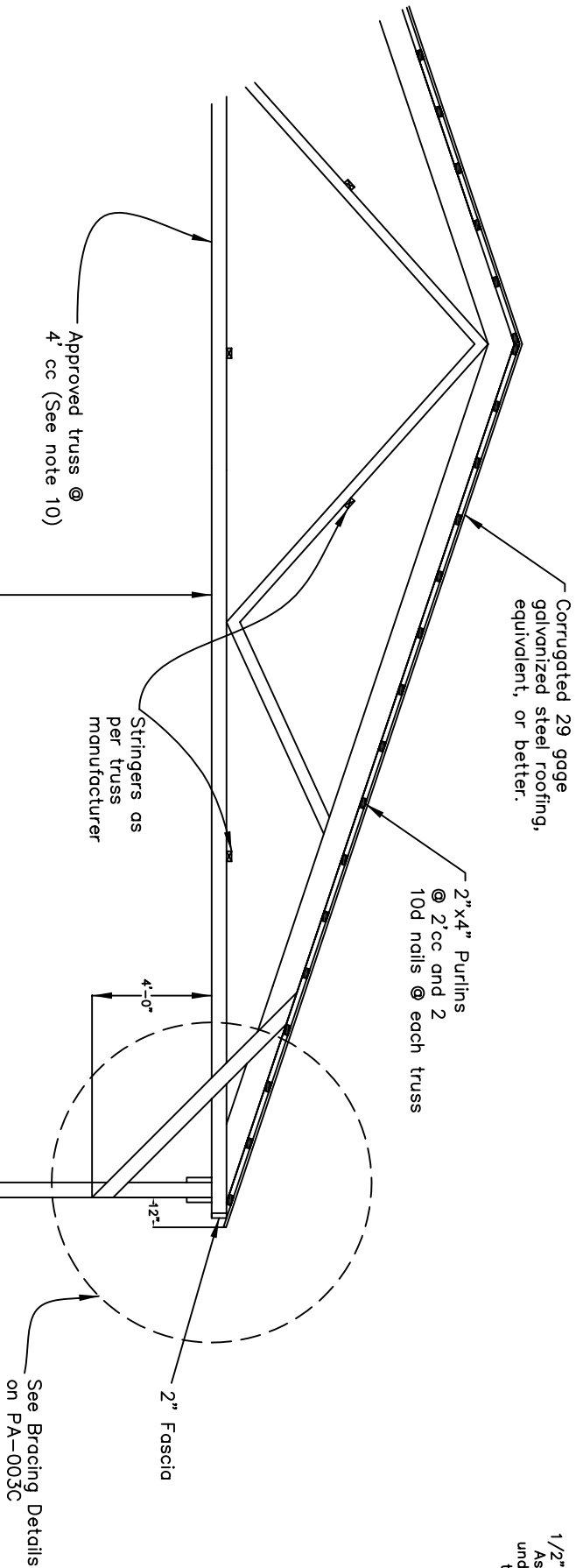
File No.
PA-0034.dwg

Drawing No.

Adopted From WV-ENG-65
and MO-84-02

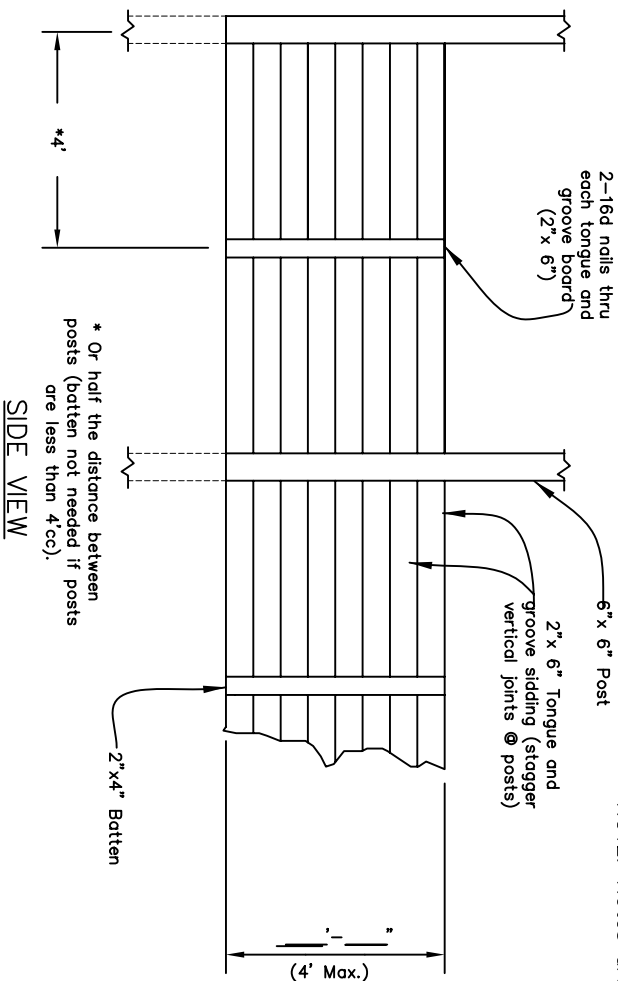
NOT TO SCALE

Sheet _____ of _____



SECTION B-B

NOTE: Notes are on PA-003C



SIDE VIEW

SIDE POSTS FOOTING PAD TABLE ^{1/}		
FOUNDATION MATERIAL ^{2/}	SIZE	THICKNESS
Durable Rock, GW, GP, SW, SP	12"x12" or 14" Dia.	4"
GM, GC, SM, SC	16"x16" or 18" Dia.	6"
CL, MH, ML, CH	20"x20" or 22" Dia.	8"

LIMITING DESIGN LOADS

Backwall earth fill: 8' Max.=110pcf, $\phi = 30^\circ$
Manure: 8' Max. Height within 4' of side walls,
25pcf Equivalent Fluid Pressure.
No siding above tongue and groove.

NOT TO SCALE

ADOPTED FROM WV-ENG-65
AND MO-84-02

REDRAWN: TJA 7/05

Date	<u>11/90</u>
Designed	<u>A. WOOD</u>
Drawn	<u>DUNN</u>
Checked	_____
Approved by	_____

_____ COUNTY, PENNSYLVANIA

ROOFED STACKING STRUCTURE - SOLID MANURE

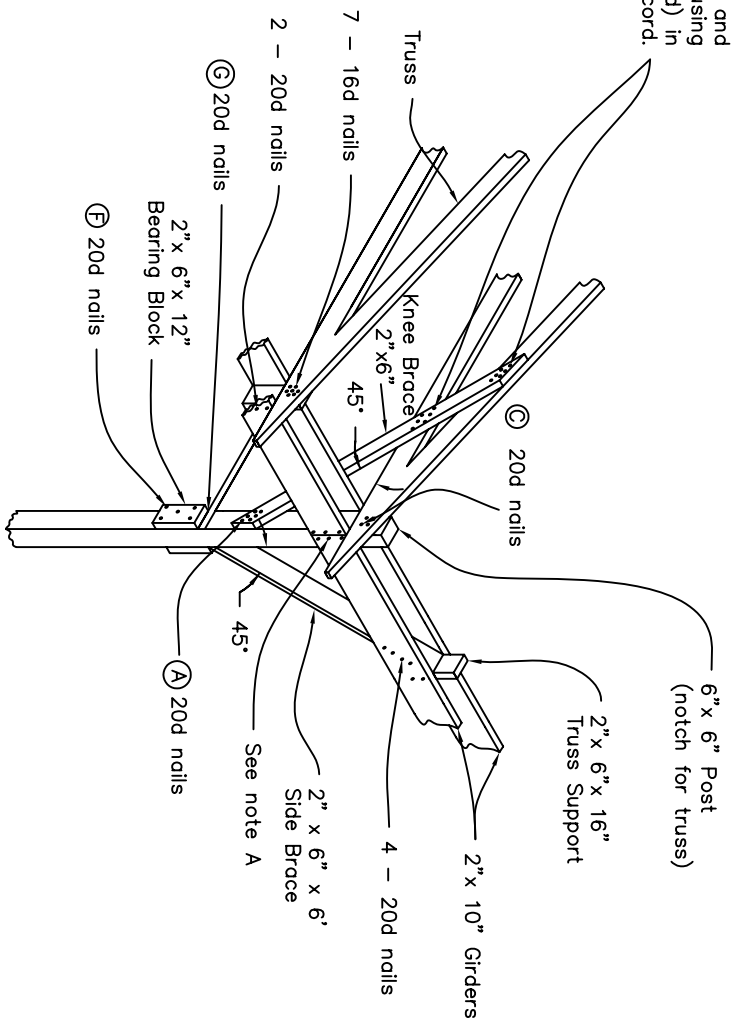
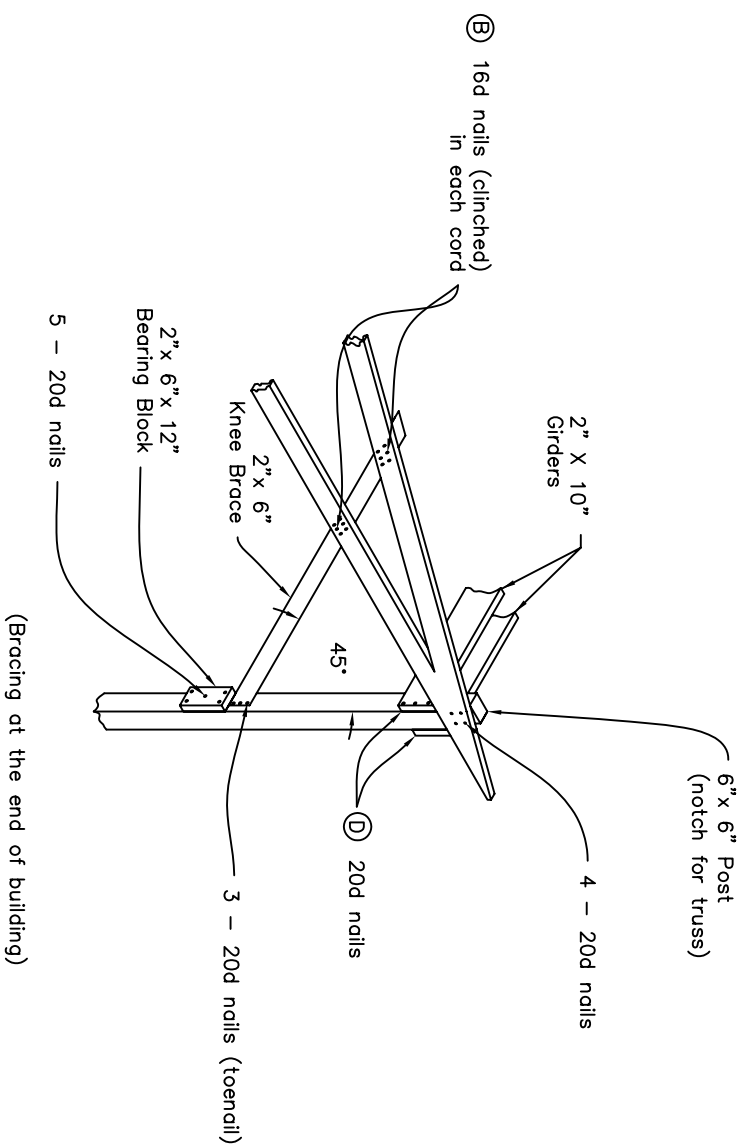


File No.
PA-003B.dwg

Drawing No.

PA-003B

Sheet _____ of _____



REDRAWN: TJA 7/05

Designed A. WOOD Date 11/90
 Drawn S. DUNN 12/90
 Checked _____
 Approved by _____

Drawn S. DUNN

Checked _____

Approved by _____

_____ COUNTY, PENNSYLVANIA

ROOFED STACKING STRUCTURE – SOLID MANURE

CONSTRUCTION NOTES

BRACING DETAILS

- A. On ends of 2"x10" Girders, use **(D)** – 20d nails. Where Girders cross treated posts, use **(D)** – 20d nails.
- B Bracing configuration may be revised by the Truss manufacturer with the prior approval of the engineer.

1. BOLTS, SCREWS, OR METAL-PLATE CONNECTORS MAY BE USED INSTEAD OF NAILS. SUCH SUBSTITUTIONS SHALL PROVIDE A CONNECTION OF EQUAL OR GREATER STRENGTH AND DURABILITY, ACCORDING TO THE NATIONAL FOREST PRODUCTS ASSOCIATION'S (NFPA) NATIONAL DESIGN SPECIFICATION.
2. NAILS SHALL BE GALVANIZED AND HAVE RING, SPIRAL, OR SCREW SHANKS ESPECIALLY DESIGNED FOR USE WITH PRESSURE PRESERVATIVE TREATED LUMBER.
3. IF POST EMBEDMENT CONCRETE IS TAKEN TO THE SURFACE, ISOLATE FROM FLOOR CONCRETE WITH TAR PAPER AND CAMBER FOR POSITIVE DRAINAGE. EARTH BACKFILL TO BE PLACED IN COMPACTED 8" LIFTS.
4. PUT 1 1/2" THICK EXPANSION JOINT MATERIAL BETWEEN 6" X 6" SIDE POSTS AND FLOOR CONCRETE.
10. TRUSSES SHALL BE DESIGNED FOR DEAD LOAD PLUS EACH OF THE FOLLOWING SEPARATE CONDITIONS:
 - (A) UNIFORM LOAD OF 20 PSF ON ENTIRE TRUSS
 - (B) UNIFORM LOAD OF 30 PSF ON HALF TRUSS
 - (C) UNIFORM UPLIFT OF 5 PSF UNDER ENTIRE TRUSS
11. SHOP DRAWINGS AND CERTIFICATIONS SHALL BE PROVIDED BY THE MANUFACTURER/SUPPLIER. (TRUSS AND STRINGER CONFIGURATION SHOWN IS FOR ILLUSTRATION PURPOSES ONLY).
11. ROOF GUTTERS WITH DOWNSPOUTS MAY BE SUBSTITUTED FOR DRIPLINE DRAIN. EITHER ALTERNATIVE MUST HAVE NON-EROSIVE, POSITIVE OUTLETS. ROOF GUTTERS SHALL MEET THE REQUIREMENTS OF NRCS CONSERVATION PRACTICE

- (c) UNIFORM UPLIFT OF 5 PSF UNDER ENTIRE TRUSS SHOP DRAWINGS AND CERTIFICATIONS SHALL BE PROVIDED BY THE MANUFACTURER/SUPPLIER. (TRUSS AND STRINGER CONFIGURATION SHOWN IS FOR ILLUSTRATION PURPOSES ONLY).
11. ROOF GUTTERS WITH DOWNSPOUTS MAY BE SUBSTITUTED FOR DRIPLINE DRAIN. EITHER ALTERNATIVE MUST HAVE NON-EROSIVE, POSITIVE OUTLETS. ROOF GUTTERS SHALL MEET THE REQUIREMENTS OF NRCS CONSERVATION PRACTICE 558.
12. END TRUSSES SHALL BE FACED WITH 3/4" EXT. C-C STRUCTURAL I PLYWOOD, CORRUGATED 29 GAGE GALVANIZED STEEL ROOFING, AN EQUIVALENT, OR BETTER.
13. ALL FINAL CUT/FILL SURFACES SHALL BE GRADED TO DIRECT SURFACE WATER AWAY FROM THE STRUCTURE.

11. IF REAR WALL IS TO BE BELOW ORIGINAL GRADE, CONTINUE SIDE DRAIN ALONG BACK WALL, BUT DO NOT HAVE DRAINFILL HIGHER THAN FLOOR SLAB.
12. END IRUSSES SHALL BE FACED WITH 3/4" EX1. C-C STRUCTURAL I PLYWOOD, CORRUGATED 29 GAGE GALVANIZED STEEL ROOFING, AN EQUIVALENT, OR BETTER.
13. ALL FINAL CUT/FILL SURFACES SHALL BE GRADED TO DIRECT SURFACE WATER AWAY FROM THE STRUCTURE.
6. BATTENS, NAILERS, POSTS, AND TONGUE AND GROOVE SIDING SHALL BE TREATED AS PER AMERICAN WOOD – PRESERVER'S ASSOCIATION STANDARD C16-82.
7. IF EXPANSION JOINTS IN FLOOR SLAB ARE MORE THAN 30' APART IN EITHER DIRECTION, THE WWF SHALL BE INCREASED TO 6" – W2.9 IN THAT DIRECTION.
8. GEOTEXTILE SHALL HAVE: (A) AN AOS BETWEEN 70 AND 100, (B) A MINIMUM TENSILE STRENGTH OF 100 LBS., AND (C) A MINIMUM PUNCTURE STRENGTH OF 40 LBS.
9. POSTS SHALL BE SOUTHERN PINE NO. 2-SR GRADE OR DOUGLAS FIR-LARCH NO. 1 GRADE (SURFACE GREEN, USED AT ANY CONDITION). ALL OTHER LUMBER SHALL BE SOUTHERN YELLOW PINE OR DOUGLAS FIR-LARCH NO. 2 GRADE (SURFACE DRY, USED AT 19% MAXIMUM MOISTURE CONTENT). SUBSTITUTION OF OTHER SPECIES AND GRADES WITH EQUAL OR GREATER BENDING STRENGTH (AS PER NFPA DESIGN VALUES FOR WOOD CONSTRUCTION) MAY BE MADE IF APPROVED BY THE ENGINEER.

Number of Nails Required		
	Span Width	
	$\leq 30'$	$>30' \text{ \& } \leq 40'$
Joint		
A	4	6
B	6	9
C	4	4
D	3	3
E	3	5
F	5	7
G	2	3

NOT TO SCALE

ADOPTED FROM WY-ENG-65
AND MO-84-02



NRCS
Natural Resources Conservation Service
United States Department of Agriculture

**Natural Resources Conservation Service
United States Department of Agriculture**

File No.
PA-003C.dwg

Drawing No.

PA-003C

Sheet _____ of _____